



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/538,755	03/30/2000	Alan David Berenbaum	Berenbaum 9-4-5-5	8283

7590 06/05/2003
RYAN, MASON & LEWIS, LLP
1300 POST ROAD, SUITE 205
FAIRFIELD,, CT 06430

EXAMINER

DONAGHUE, LARRY D

ART UNIT	PAPER NUMBER
----------	--------------

2154

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/538,755

Applicant(s)

Examiner

Group Art Unit

2154

--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 111; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-16 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-16 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 3
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2154

1. Claims 1-16 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6-9, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Chung et al. (5,404,469).
4. Chung et al. taught a multithreaded VLIW (col. 5, lines 40-62) including a plurality of functional units (110) executing instructions grouped in packets by the compiler (col. 3, lines 8-29, col. 7, lines 20-40, col. 8, lines 32-55) and an allocator for selecting and forwarding the instructions to the functional units (col. 3, line 54 - col. 4, line 63, col. 3, lines 8-29, col. 7, lines 20-40, col. 8, lines 32-55) .

Chung et al. was cited by applicant on paper no. 3.

As to claims 8, 15 and 16, they fail to teach or define above or beyond claim 1, and are rejected for the reason set forth above.

As to claims 2 and 9, Chung et al. taught allocator assigns as many instructions as permitted by the availability of functional units (col. 3, lines 8-29).

Art Unit: 2154

As to claim to claims 6, 7, 13 and 14, Chung et al. taught the allocator can spilt an instruction packet (col. 3, line 54 - col. 4, line 63).

Claims 1-5, 8-12, and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Keckler et al.(5,574,939).

Keckler et al. was cited by applicant on paper no. 3.

Keckler et al. taught a multithreaded VLIW (abstract) including a plurality of functional units (250) executing instructions grouped in packets by the compiler (col. 1, lines 31-52) and an allocator for selecting and forwarding the instructions to the functional units (col. 2, lines 21-38, col. 3, line 58 - col. 4, line 8) .

As to claims 8, 15 and 16, they fail to teach or define above or beyond claim 1, and are rejected for the reason set forth above.

As to claims 2 and 9, Keckler et al. taught allocator assigns as many instructions as permitted by the availability of functional units (col. 2, lines 21-38).

As to claims 3 and 10, Keckler et al. taught storing the instruction for a later cycle (col. 9, line 56 - col. 10, line 18).

As to claims 4 and 11, Keckler et al. taught updating the instruction packets from the instruction stream of the thread (col. 9, line 56 - col. 10, line 18).

As to claims 5 and 12, Keckler et al. taught retaining the instruction packet (col. 9, line 56 - col. 10, line 18).

Art Unit: 2154

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al. Multi-threaded VLIW processor Architecture for HDTV

Luick et al. 5,890,009

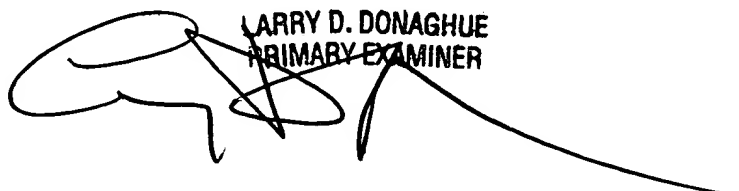
Nakanishi 5,805,852

6. A shortened statutory period for response to this action is set to expired THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C 133.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. Donaghue whose telephone number is (703) 305-9675. The examiner can normally be reached on M-F from 8:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An, can be reached on (703) 305-9678. The fax phone number for an official fax is (703) 746-7238, an after-final fax is 703-746-7238 and a draft or non-official fax is 703-746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.


LARRY D. DONAGHUE
PRIMARY EXAMINER